IMPLEMENTATION OF COMPLIANCE THROUGH P2 IN AFMC

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BACKGROUND

AFMC is unique among the Air Force Major Commands because of its weapon systems acquisition and sustainment mission. These industrial type activities present diverse and complex Environmental, Safety, and Occupational Health (ESOH) challenges. The command uses most of the Air Force's hazardous materials and has nearly 80% of all regulatory permits issued to the Air Force. The EPA's 1994 Toxic Release Inventory (TRI) showed that AFMC installations or plants accounted for six of the top ten DoD facilities in terms of quantities of toxic materials releases. Since that time, AFMC has attained the Air Force's 1999 goal of 50% reduction in toxic releases, due in part to the large investment in pollution prevention (P2) equipment and technology. In this manner, AFMC has addressed compliance with P2 solutions for several years, and the reduction in pollution should result in a corresponding decrease in environmental compliance burden. Even so, AFMC's planned outyear budget for compliance activities (monitoring, reporting, permits, etc.) is projected to remain relatively flat through FY03. The Federal budgetary climate is forcing a change in this situation.

DRIVERS FOR CHANGE

Concern has been growing in Congress over continued P2 investment with little or no decrease in the compliance burden. The expectation was that compliance costs would be reduced as P2 investments address compliance requirements and the resulting savings could then go toward mission support. In response to these concerns, the Air Force is requiring a 20% shift in compliance funds to P2 efforts by FY03. This does not equate to an increase in total environmental funding, however, the AFMC P2 budget will increase from 18% of environmental quality funding in FY96 to 38% in FY03.

The Air Force is committed to using P2 solutions as a cost-effective means of addressing compliance requirements. Over the past several years, AFMC's P2 investments and the

interaction of their P2 and EC efforts have curbed the growth of compliance requirements (e.g., addressing outyear NESHAP requirements with solvent reduction initiatives). With this experience, the command was able to assist Air Staff in developing policies for addressing compliance with P2 solutions, and helped rewrite AFI 32-7080. USAF/ILEV issued guidance in August and November of 1997 defining a requirement to reduce compliance burdens by addressing the root causes of environmental problems through implementation of P2 solutions, which is Compliance Through P2 (CTP2).

AFMC'S ACTIONS

Because P2, by definition, reduces solid and hazardous waste/materials by addressing them at or near the beginning of the process pipeline, it consequently reduces the amount of pollution that must be dealt with at the disposal end of the process, so activities that reduce pollution will likely affect compliance activities. However, AFMC's strategy for prioritizing P2 investments prior to FY98 treated potential reduction in compliance burden as a side benefit. Priorities instead were based upon the amount of Toxic Release Inventory (TRI) chemicals, EPA-17 chemicals, or Ozone Depleting Substances (ODSs) that could be eliminated. What counted was that the total aggregate of a chemical be reduced toward meeting the Air Force's 1999 goal, not that the reduction resulted in the elimination of a compliance activity.

AFMC's Environmental Division (HQ AFMC/CEV) will execute $90.7M of the Air Force Environmental Quality (P2 and compliance) budget in FY98. It has set out to be the Air Force, and possibly the DoD, leader in establishing and operating cost effective P2 programs to enhance mission support. AFMC/CEV has recognized the need to institutionalize CTP2 as a cost-effective way to meet the command's environmental goals. It has progressed towards that goal by: (1) altering P2 investment priorities for FY99 by changing the emphasis from "pounds reduced" to "compliance burden reduced", (2) including "Compliance Sites Addressed" as a business activity and Business Performance Indicator (BPI), (3) modifying the P2 project review process to incorporate review by both P2 and EC functions, and (4) adjusting P2 management activities such as Opportunity Assessments to more directly link P2 with compliance. While maintaining an emphasis on the existing solid and hazardous waste program areas, AFMC is re-engineering the P2 program to help customers reduce their compliance burden and liability.

CTP2 SUCCESSES TO DATE

For the past few years, AFMC has been reaping CTP2 benefits from its traditional waste stream reduction initiatives. A prime example of this is Oklahoma City ALC's investment in Aqueous Pressure Spray Washer Cleaning Systems, used in parts cleaning and degreasing. The spent solution from the parts cleaners can be sent to the wastewater treatment plant instead of having to be disposed as hazardous waste. Use of the spray washers eliminated 220,000 pounds of 1,1,1-trichloroethane, 25,000 pounds of CFC-113 (Freon) degreasers, and 8,000 pounds of PD-680 annually. The new process reduced the amount of waste and materials governed by the Clean Air Act and RCRA, decreased process times, and increased worker safety.

Recently, AFMC has been pursuing innovative CTP2 projects. These efforts link P2 investment directly with a corresponding reduction in compliance burden and ultimately reduce the costs of compliance. The emphasis on cost payback in these investment decisions mirrors the command's move toward a more businesslike approach to how funds are allocated.

1. Arnold AFB invested in a wastewater loopback system which allows reuse of some of its cooling water. This reduced the amount discharged into two ditches, which requires NPDES permits. Reducing the discharge into the ditches reduced the need for monitoring, analysis, sampling, and reporting for both NPDES permits and the high-cost Toxicity Reduction Evaluation (TRE) required by the state of Tennessee for discharges with high biotoxicity.

2. Warner-Robins ALC is investing in a wastewater disinfection process change from chlorine to an ultraviolet system. It will eliminate the requirement for (a) a Risk Management Plan (RMP) for chlorine (an extremely hazardous substance) under Section 112 of Title III of the Clean Air Act of 1990, and (b) a chlorine removal system to keep amount in the discharge below NPDES permit limits. The investment will pay for itself in 3.75 years and after that time will save the Air Force about $20,000 annually.

3. Eglin AFB has initiated recycling of used plastic media blast, fluorescent light tubes, antifreeze, and R-22 refrigerant instead of handling and disposing of them as hazardous waste. Liability associated with their handling and disposal will be reduced, and the payback period is approximately three years.

4. Edwards AFB has derated two of its gas-fired hot water boilers below 5,000,000 BTU/hr, and is proposing to derate four more. This will eliminate the need to maintain permits for those boilers in accordance with the Kern County Air Pollution Control District requirements.

AFMC'S BUSINESS ORIENTATION

AFMC is in the process of transitioning from using a "budget" management system to a "cost" management system. The challenge is to move toward operating like a business in FY98. This initiative reflects the command's commitment to implement SAF/MIQ's proposal to increase productivity by lowering ESOH costs. Under the old system of budget management, funds were justified based upon inputs such as pay, supplies, projects, etc. In activity-based cost management, funds are justified with activity outputs, unit costs and a standard level of service applied consistently across the command.

The Installations and Support (I&S) Business Area is one of eight identified for the command, and Environmental Management is one of four I&S business lines. Environmental Management has four product lines, one being P2. The P2 product is to "help customers reduce compliance burden/liability and maintain previously implemented P2 initiatives". The P2 product line has seven defined activities that support it.

Base and headquarters personnel have worked together to define the outputs of the activities that comprise the P2 product, along with quantitative and qualitative standards for each activity. "Output" is a quantitative measurement of P2 activity (e.g., number of compliance sites addressed). Annual operating expenses are projected using the "unit cost", defined as "recurring costs" divided by "output". Recurring costs occur on an annual basis, such as civilian pay, supplies, and information system support. To obtain total P2 I&S funds, recurring costs will be added to capital investments (non-recurring projects).

"Non-recurring costs" result from specific program activities that are not done annually (e.g., specific projects that come once every five years). They are laid into the budget to cover one time costs normally considered capital investments (i.e., new equipment, systems, or facilities), dem/val of an alternative process, implementation of an alternative material, or initial preparation of plans/studies/inventories.

AFMC's Business Performance Indicators (BPIs) also reflects AFMC's move to a cost-management system. The P2 product line has four BPIs: Hazardous Material Use, Hazardous Waste Disposal, Solid Waste Diversion, and Compliance Sites Addressed. "Compliance sites addressed" is a completely new measure of performance for AFMC, and directly links P2 and compliance activities.

COMPLIANCE SITES

A shift in AFMC's environmental focus is occurring as the new concept of compliance sites is implemented. A compliance site is a location, activity or process that has one or more compliance activities. The goal is to reduce compliance burdens and liabilities (i.e., number of compliance sites) through cost effective P2 measures.

The Compliance Site performance standard is based on the number of compliance sites that have been evaluated for P2 opportunities compared to the total number of compliance sites. These efforts link P2 investment directly with a corresponding reduction in compliance burden and ultimately reduce the costs of compliance. The emphasis on cost payback in these investment decisions mirrors the command's move in recent years toward a more businesslike approach to how funds are allocated. Compliance sites include the following: (1) Air Sources - number of stationary emission sources covered by permits; (2) Hazardous Waste Storage Sites - number of Initial Accumulation Points, 90-day sites, and Treatment, Storage, or Disposal Facilities; (3) Water Sources - any permitted water discharge point; (4) RCRA cleanup sites - number of sites funded for cleanup; (5) USTs and ASTs - number regulated; and (6) "Other" - number of permitted solid waste landfills and pesticide facilities.

A site will be considered "addressed" when the owner of the compliance site is provided with information which identifies source reduction alternatives. These alternatives should eliminate the site from regulatory control or significantly reduce the compliance burden.

CTP2 PROJECT APPROVAL PROCESS

To properly implement CTP2, the focus needs to shift from investing in "projects" to "addressing compliance sites". FY99 will be a transition year in that candidate CTP2 projects are being reviewed by a panel comprised of P2 and EC program managers. A portion of the required funds transfer has already been accomplished by identifying eligible projects and executing a zero balance transfer of funds between program elements. The rest of the budget transfer will be accomplished by identifying CTP2 projects and shifting funding during the execution year.

Potential outyear projects will be identified at the base level by scrubbing P2 and EC programs for CTP2 opportunities. CTP2 projects will be submitted to HQ AFMC through the EC program. HQ AFMC media managers will review them to ensure they actually address a regulatory requirement. They will then be "earmarked" as CTP2 and the required funds will be transferred with the projects to the P2 Branch. A CTP2 project may be either (1) an EC project which has a P2 solution, or (2) a compliance O&S requirement that may be reduced or eliminated via a P2 solution.

CTP2 INSTITUTIONALIZATION

AFMC is committed to institutionalizing CTP2 as a strategy to ensure environmental quality, and wants to ensure that the command's efforts and initiatives are part of a cohesive environmental management system (EMS). To that end, the HQ AFMC P2 Branch recently engaged the AFMC Human Systems Center (HSC/XRE), with the cooperation of the Air Force Center for Environmental Excellence (AFCEE), to develop an action plan for enhancing CTP2 integration into policy and procedures. HSC/XRE evaluated AFMC's environmental program from the perspective of the EPA's Code of Environmental Management Principles (CEMP). CEMP has five broad principles and underlying performance objectives that any Federal agency can use to evaluate its EMS. The resulting Action Plan will have recommendations for how to most efficiently achieve CTP2 as a paradigm. One recommendation already identified is how P2 Management Action Plans (P2 MAPs) and Opportunity Assessments (OAs) are performed.

OA/P2 MAP APPROACH

A key method for identifying requirements for CTP2 projects at the base level is by conducting P2 OAs. Air Force installations are required to conduct OAs periodically to identify P2 opportunities and solutions. OAs are traditionally done base-wide, and the results used as a basis for initiating P2 projects. Installations are also currently required to maintain P2 MAPs defining their P2 program, structure, pollution-generating activities, goals, and plans to achieve those goals. The MAP is updated using the OA results, and both have been oriented along the traditional P2 programs of reducing pounds of waste, whether or not the waste stream caused a compliance cost/liability. AFMC saw the need to revise this approach to link the installations' P2 programming and budgeting with environmental compliance.

AFMC plans to revise its MAP format in FY99 to have installations list their compliance sites with associated compliance requirements. Under a new format, OAs will be conducted with the goal of reducing compliance burdens, and from these OAs will come the future projects that will reduce the cost of doing business.

CONCLUSION

AFMC's P2 program will continue to meet AF and DoD environmental goals and objectives even during periods of budgetary constraints. But more importantly, the reduction efforts will shift from attempting to eliminate the greatest number of pounds to eliminating those pounds which create the greatest environmental compliance burden. AFMC is a leader at ensuring that cost effective solutions are used to achieve "Compliance Through P2" in the present and future. This proactive approach - along with the fact that P2 makes good business sense - will ensure our environmental programs continue to enhance AFMC mission readiness.